(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date 7 October 2004 (07.10.2004)

PCT

(10) International Publication Number WO 2004/085663 A1

(51) International Patent Classification⁷: (C12P 7/24, C12R 1:01, 1:465)

C12P 7/24 //

(21) International Application Number:

PCT/GB2004/001394

(22) International Filing Date: 29 March 2004 (29.03.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 0307232.9

28 March 2003 (28.03.2003) GB

- (71) Applicant (for all designated States except US): ZYLEP-SIS LIMITED [GB/GB]; C/o Grant Thornton, Byron House, Cambridge Business Park, Cowley Road, Cambridge, Cambridgeshire CB4 0WZ (GB).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): HEALD, Steve [GB/GB]; C/o Grant Thornton, Byron House, Cambridge Business Park, Cowley Road, Cambridge, Cambridgeshire CB4 0WZ (GB). MYERS, Steve [GB/GB]; C/o Grant Thornton, Byron House, Cambridge Business Park, Cowley Road, Cambridge, Cambridgeshire CB4 0WZ (GB). ROBBINS, Keith [GB/GB]; C/o Grant Thornton, Byron House, Cambridge Business Park, Cowley Road, Cambridge, Cambridgeshire CB4 0WZ (GB). WALFORD, TIM [GB/GB]; C/o Grant Thornton, Byron House, Cambridge Business Park, Cowley Road, Cambridge, Cambridge Business Park, Cowley Road, Cambridge,

Cambridgeshire CB4 0WZ (GB). HILL, Colin, Anthony [GB/GB]; 10 Myrtle Green, Ashford, Kent TN23 3QN (GB).

- (74) Agents: STUART, Ian et al.; Mewburn Eliis, York House, 23 Kingsway, Greater London, London WC2B 6HP (GB).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: PREPARATION OF VANILLIN FROM MICROBIAL TRANSFORMATION MEDIA BY EXTRACTION BY MEANS SUPERCRITICAL FLUIDS OR GASES

(57) Abstract: Crude solid vanillin-containing material is precipitated from a solution obtained by biotransformation, and purified by a process comprising contacting it with a purification fluid selected from (a) a liquefied gas whose pressure exceeds its critical pressure and whose temperature is below its critical temperature; (b) a supercritical fluid; (c) a gas. The fluid is preferably liquid carbon dioxide. The temperature is maintained below 25°. The product may be further purified by treatment with CO₂ in a fluid bed drier. The crude material is preferably one precipitated from a solution resulting from biotransformation of ferulic acid. A new strain of Amycolatopsis capable of generating high concentrations of vanillin with minimal odoriferous by-products (e.g. guaiacol) is also disclosed.

